IT

Docket Number: 071469-0306049 Client Reference: PC8016ABC PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of

LEE CHEN, et al.

Application No.: 10/670,795

Filed: September 26, 2003

Group Art Unit: 2812

**Examiner: Not Yet Assigned** 

Confirmation No.: 7899

For: A METHOD AND SYSTEM FOR ETCHING HIGH-K DIELECTRIC MATERIALS

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO-1449. As this application was filed after June 30, 2003, no copies of the two cited U.S. patents are enclosed; however, one copy of each foreign patent reference and each non-patent literature reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom. Applicants respectfully request the Examiner return an initialed copy of the enclosed Form PTO-1449 to Applicants with the next Office communication to indicate that the references has been considered, per MPEP § 609.

This Information Disclosure Statement is being filed before the mailing date of the first Office Action on the merits in the present application. No certification or fee is required.

These references were cited in an International Search Report, dated September 20, 2004, in a corresponding international application.

Respectfully Submitted.

Jeffrey D. Karceski Registration Number 35914 Customer Number: 00909

Date: October 5, 2004

PILLSBURY WINTHROP LLP Telephone: (703) 905-2000 Facsimile: (703) 905-2500

P.O. Box 10500 McLean, VA 22102



PTO/SB/08a (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

			U. S. PATENT	DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Document Number  Number-Kind Code <sup>2 (If known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	<sup>US-</sup> 6,065,481	05-23-2000	FAYFIELD et al.	
	2	US- 6,211,126 B1	04-03-2001	WOJTCZAK et al.	•
		US-			
		US-			
	<u> </u>	US-			
		US-			,
	1	US-			
		US-			

	FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. <sup>1</sup>		atent Document le <sup>3-</sup> Number <sup>4-</sup> Kind Code <sup>5</sup> ( <i>if known</i> )		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т <sup>6</sup>	
	Α	EP	0 964 439	<b>A</b> 1	12-15-1999	ROBERTSON et al.		L	
	В	EP	1 201 603	A2	05-02-2002	ROBERTSON et al.		-	

Examiner	Date	
Signature	Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. Applicant's unique citation designation number (optional). See Kinds Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible.

6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/08b (08-03)
Approved for use through 06/30/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for	form 1449B/PTO				Complete if Known
				Application Number	10/670,795
	RMATION DIS			Filing Date	09/26/2003
STATI	STATEMENT BY APPLICANT			First Named Inventor	LEE CHEN
				Art Unit	2812
	(Use as many sheets as	necessary)		Examiner Name	
Sheet	1	of	1	Attorney Docket Number	071469-0306049

NON PATENT LITERATURE DOCUMENTS						
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²			
	I	JAIN, AJAY ET AL., "Thermal dry-etching of copper using hydrogen peroxide and hexafluoroacetylacetone," Thin Solid Films, Elsevier Science S.A., p. 51-56, (June 28, 1995)				
	II	STEGER, RICHARD ET AL., "Chemical vapor etching of copper using oxygen and 1,1,1,5,5,5-hexafluoro-2,4-pentanedione," Thin Solid Films, Elsevier Science S.A., p. 221-229, (July 24,1999).				
	Ш	LEE, WONHEE ET AL., "Dry patterning of copper films using an O2 plasma and hexafluoroacetylacetone," Thin Solid Films, Elsevier Science B.V., p. 122-127, (March 12, 2)	001).			
		·				

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.